

DEPARTMENT OF TRANSPORTATION

ESC/OE
1727 30TH STREET, 2ND FLOOR
SACRAMENTO, CA 95816

TDD (916) 654-4014

**Errata #1**

TO: All holders of the July 1992 edition of the Standard Plans Book

FROM: Engineering Service Center-Office of Office Engineer

SUBJECT: Errata

DATE: July 19, 1994

The attached Revised Standard Plans (RSPs) and New Standard Plans (NSPs) dated June 13, 1994, November 5, 1992 and July 1, 1992 contain revisions and additions to the July 1992 edition of the Standard Plans Book.

Revised Standard Plans (RSPs) are to replace the comparable sheets in the July 1992 edition of the book. New Standard Plans (NSPs) are to supplement the July 1992 edition of the book.

The revisions or additions to the attached Revised Standard Plans (RSPs) and New Standard Plans (NSPs) are:

RSP A20D, "Pavement Markers and Traffic Lines-Typical Details", revises the 96-foot dimension to 200 feet for the 4-foot long, 6-inch wide broken traffic stripe shown in Detail 39A of this plan.

NSP A40, "Rumble Strip Details", provides for the construction of rumble strips on newly paved asphalt concrete shoulders. The rumble strip will provide a warning to sleepy or inattentive motorist that their vehicle is drifting off the highway.

NSP A75D, "Concrete Headlight Glare Screen", provides for the construction of concrete headlight glare screen on Type 50 series concrete barriers. Concrete headlight glare screen is now the standard for permanent headlight glare screen installations on Type 50 series concrete median barriers.

RSP A87, "Curbs, Dikes and Driveways", revises the driveway details to comply with access requirements as provided in state and federal accessibility regulations. The revisions also provide for widening, or flaring, of the driveway at the curb face to facilitate higher speed entry and exit.

RSP H8, "Planting and Irrigation Details", revises the 75-foot dimension to 85 feet for the length of the maintenance vehicle pullout.

NSP T7, "Construction Project Funding Identification Signs", replaces NSP FS-1 and NSP FS-2 which were issued on June 20, 1990 as supplements to the previous edition of the Standard Plans book.

NSP T15, "Traffic Control System for Moving Lane Closure on Multilane Highways", provides for vehicular moving lane closures on the median or outside lane of multilane highways. (See Note "A" below).

NSP T16, "Traffic Control System for Moving Lane Closure on Multilane Highways", provides for vehicular moving lane closures on the interior lanes of multilane highways. (See Note "A" below).

NSP T17, "Traffic Control System for Moving Lane Closure on Two Lane Highways", provides for vehicular moving lane closures on two lane highways. (See Note "A" below).

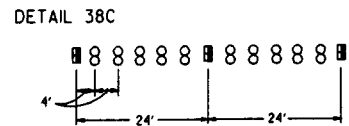
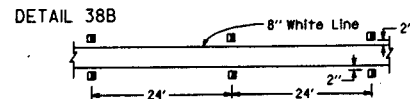
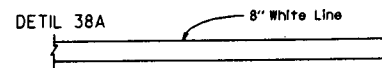
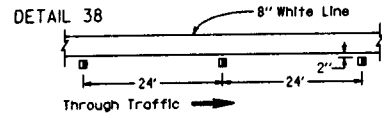
Note "A": NSP T15, NSP T16 and NSP T17 will typically be used for traffic striping operations or pavement marker replacement operations using bituminous adhesive. NSP T15, NSP T16 and NSP T17 are not to be used where workers would be on foot in the work area.

RSP B3-9, " Retaining Wall Details No. 2", revises the bar reinforcing steel configuration and dimensions for the reinforcement around the opening in the retaining wall utility opening detail shown on this plan.

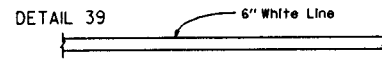
In addition to the attached 8-1/2" x 11" copies of the above listed Revised Standard Plans (RSPs) and New Standard Plan (NSPs), also attached is a current list of new and revised standard plans issued subsequent to the publication of the July 1992 Standard Plans Book and the current revised Standard Plans List for use with the July 1992 edition of the Standard Plans Book.

Details from many of the plans of the July 1992 Standard Plans Book and details from Revised Standard Plans and New Standard Plans issued subsequent to the publication of the July 1992 edition of the Standard Plans Book are available for access by Caltrans personnel from the following location:
</net/trws004/drv4/stdplans/imperial/details/>.

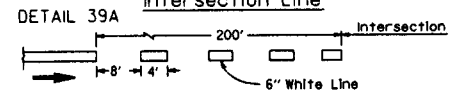
CHANNELIZING LINE



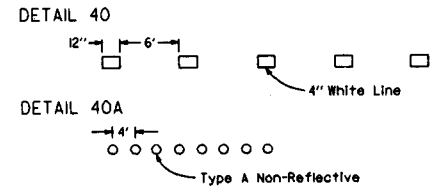
BIKE LANE LINE



BIKE LANE Intersection Line



LANE LINE EXTENSIONS THROUGH INTERSECTIONS

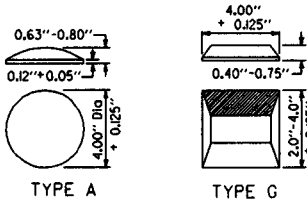


LEGEND

- MARKERS**
- TYPE A White Non-reflective
 - TYPE C One-way Clear Reflective
- ← Direction of Travel

MARKER DETAILS

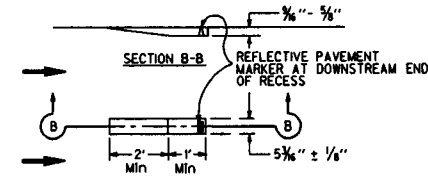
Reflective Face



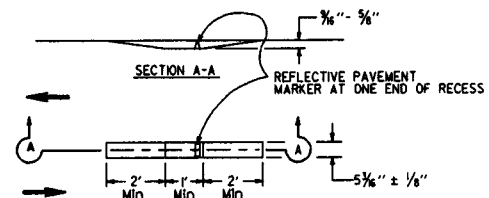
NOTES

1. Minimum projected area of reflective face = 1.00 square inch
 2. Reflective markers need not be rectangular
 3. See typical traffic line details for marker patterns to be used with recessed pavement markers.
- Detail 14 requires a Type 2 recess.

RECESS DETAIL FOR REFLECTIVE PAVEMENT MARKER



ONE-WAY TRAFFIC (TYPE 1)



TWO-WAY TRAFFIC (TYPE 2)

REFLECTIVE PAVEMENT MARKER FOR RECESSED INSTALLATION



TYPE C & TYPE D TYPE G & TYPE H

See Note 3

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKERS AND TRAFFIC LINES TYPICAL DETAILS

NO SCALE

RSP A200 DATED NOVEMBER 5, 1992 SUPERSEDES STANDARD PLAN A200 DATED JULY 1, 1992, PAGE 6 OF THE STANDARD PLANS BOOK DATED JULY 1992.

REVISED STANDARD PLAN RSP A200

DIST	COUNTY	ROUTE	POST MILES	SHEET	TOTAL SHEETS

REGISTERED CIVIL ENGINEER


November 5, 1992

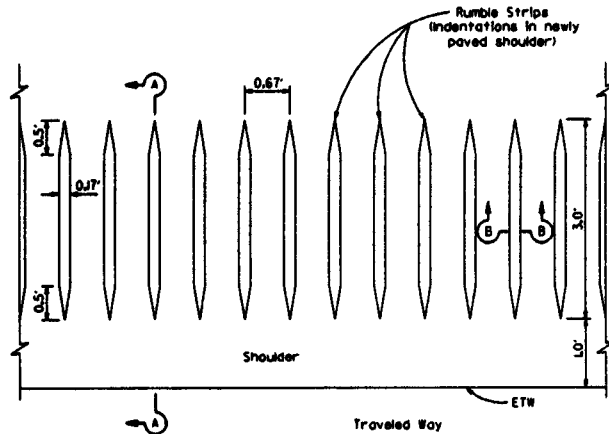
PLANS APPROVAL DATE

Professional Seal: E. London Jr., No. 12284, Exp. 3-31-93, CIVIL, STATE OF CALIFORNIA

STD. PLAN RSP A200

To accompany plans dated _____

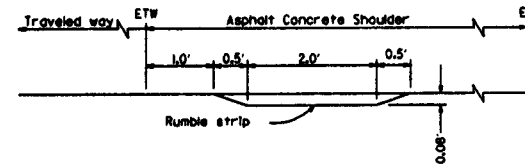
DIST.	COUNTY	ROUTE	POST MILES	SHEET NO.	TOTAL SHEETS
REGISTERED CIVIL ENGINEER <i>P. J. London, Jr.</i> June 13, 1994 PLANS APPROVAL DATE					



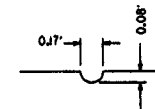
PLAN

NOTE

Where bicycles are permitted, shoulder rumble strips should not be used unless approximately 5 feet of clear shoulder width for bicycle use is available between the rumble strips and the outer edge of the shoulder.



SECTION A-A

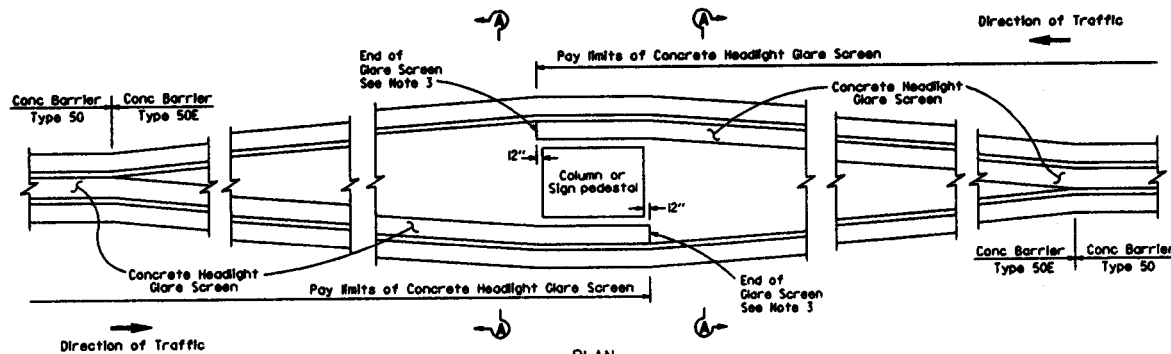


SECTION B-B

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
RUMBLE STRIP DETAILS
NO SCALE

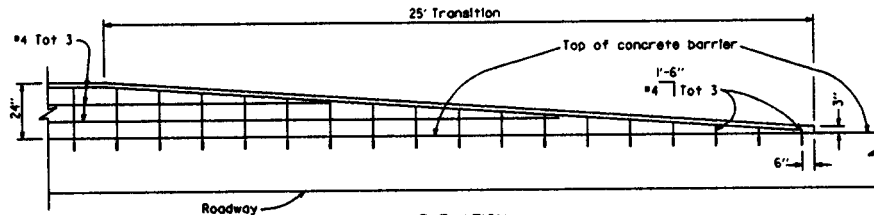
NEW STANDARD PLAN NSP A40

STD. PLAN NSP A40

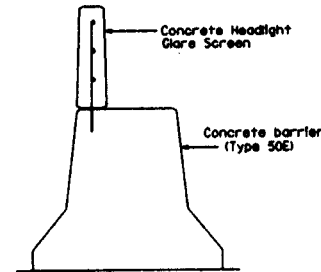


PLAN

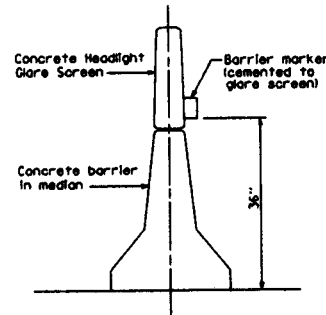
CONCRETE HEADLIGHT GLARE SCREEN AT CONCRETE BARRIER TYPE 50E



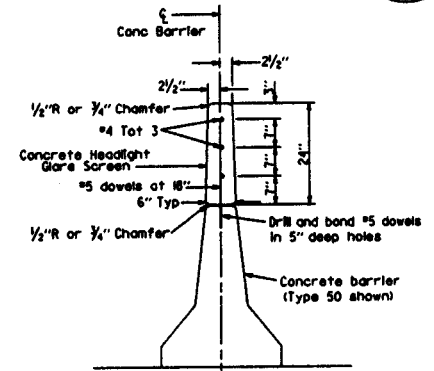
ELEVATION
CONCRETE HEADLIGHT GLARE
SCREEN END TRANSITION



SECTION A-A



BARRIER DELINEATION
See Notes 4 and 5



CONCRETE HEADLIGHT GLARE SCREEN
ON CONCRETE BARRIER

NOTES

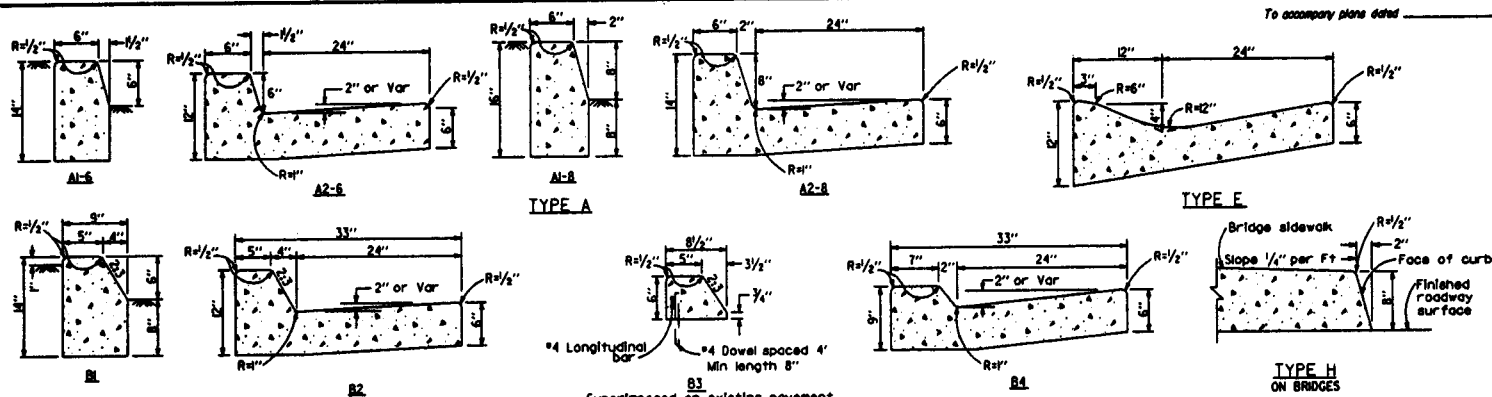
1. For concrete barrier details and layouts not shown see Standard Plans A75A and A75B.
2. Expansion joints in concrete glare screen shall match expansion joints in concrete barrier.
3. Concrete headlight glare screen shall extend one foot beyond all columns or sign pedestals for each direction of travel. Sloped end and transition of concrete glare screen not required where glare screen terminates on concrete barrier Type 50E.
4. Barrier delineation to be used when required by the special provisions.
5. Spacing of barrier markers to match spacing of raised pavement markers on the adjacent median edgeline pavement delineation.

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION CONCRETE HEADLIGHT GLARE SCREEN NO SCALE

DIST.	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

DESIGNED BY: *[Signature]*
CHECKED BY: *[Signature]*
DATE: June 13, 1994
PLANS APPROVAL DATE: *[Signature]*
DATE: 3-31-95
CIVIL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
J. E. SUMMITT
20741
DATE: 3-31-95
CIVIL



DIST	COUNTY	ROUTE	POST MILES	SHEET	TOTAL SHEETS
REGISTERED CIVIL ENGINEER					
June 13, 1994					
PLANS APPROVAL DATE					

14547
Exp. 8-30-95
CIVIL
2018 C.E.

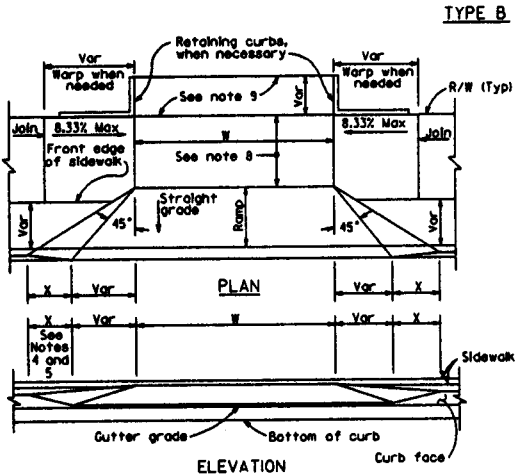
CURB QUANTITIES

TYPE	CY PER LF
A1-6	0.02585
A2-6	0.05903
A1-8	0.03084
A2-8	0.06379
B1	0.02930
B2	0.06171
B3	0.0074
B4	0.05709
E	0.06661

AC DIKE QUANTITIES

TYPE	CY PER LF
A	0.0135
B	0.0103
C	0.0038
D	0.0293
E	0.0130

AC quantities based on 5% cross slope



CURBS

Superimposed on existing pavement

*4 Longitudinal bar

*4 Dowel spaced 4' Min length 8"

B3

ES

0.25'

0.42'

0.25'

Var cut slope

Fill and compact with excavated material to top of dike

See Note A

Var

Level line

TYPE A HIGH DIKE

ES

0.25'

0.42'

0.25'

Var cut slope

Fill and compact with excavated material to top of dike

Compact AC against excavated face

See Note A

Var

Level line

TYPE B HIGH DIKE

ES

1.00'

R=0.08'

Var slope

See Note A

Level line

TYPE E MOUNTABLE DIKE

ES

0.25'

0.42'

0.25'

Var cut slope

Fill and compact with excavated material to top of dike

Compact AC against excavated face

See Note A

Var

Level line

TYPE B HIGH DIKE

ES

1.00'

R=0.08'

Var slope

See Note A

Level line

TYPE E MOUNTABLE DIKE

ES

0.25'

0.42'

0.25'

Var cut slope

Fill and compact with excavated material to top of dike

Compact AC against excavated face

See Note A

Var

Level line

TYPE B HIGH DIKE

ES

1.00'

R=0.08'

Var slope

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Level line

TYPE E MOUNTABLE DIKE

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0.42'

0.25'

Var cut slope

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Compact AC against excavated face

See Note A

Var

Level line

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ES

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R=0.08'

Var slope

See Note A

Level line

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0.42'

0.25'

Var cut slope

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Level line

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Var slope

See Note A

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0.42'

0.25'

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Compact AC against excavated face

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Level line

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R=0.08'

Var slope

See Note A

Level line

TYPE E MOUNTABLE DIKE

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0.25'

0.42'

0.25'

Var cut slope

Fill and compact with excavated material to top of dike

Compact AC against excavated face

See Note A

Var

Level line

TYPE B HIGH DIKE

ES

1.00'

R=0.08'

Var slope

See Note A

Level line

TYPE E MOUNTABLE DIKE

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0.25'

0.42'

0.25'

Var cut slope

Fill and compact with excavated material to top of dike

Compact AC against excavated face

See Note A

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Level line

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See Note A

Level line

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0.42'

0.25'

Var cut slope

Fill and compact with excavated material to top of dike

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See Note A

Var

Level line

TYPE B HIGH DIKE

ES

1.00'

R=0.08'

Var slope

See Note A

Level line

TYPE E MOUNTABLE DIKE

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0.25'

0.42'

0.25'

Var cut slope

Fill and compact with excavated material to top of dike

Compact AC against excavated face

See Note A

Var

Level line

TYPE B HIGH DIKE

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1.00'

R=0.08'

Var slope

See Note A

Level line

TYPE E MOUNTABLE DIKE

ES

0.25'

0.42'

0.25'

Var cut slope

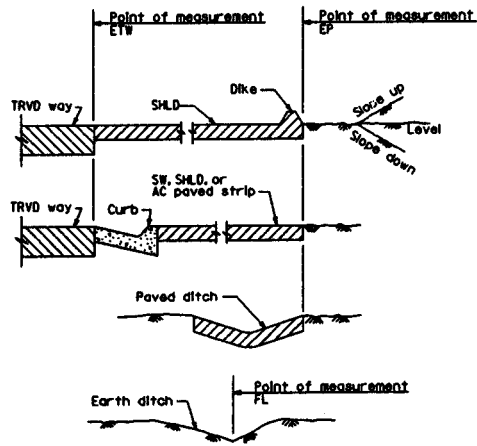
Fill and compact with excavated material to top of dike

Compact AC against excavated face

See Note A

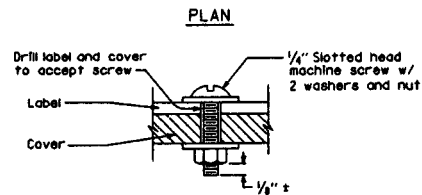
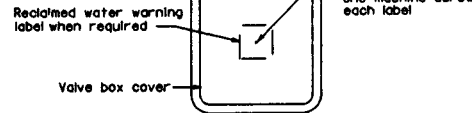
Var

Level line

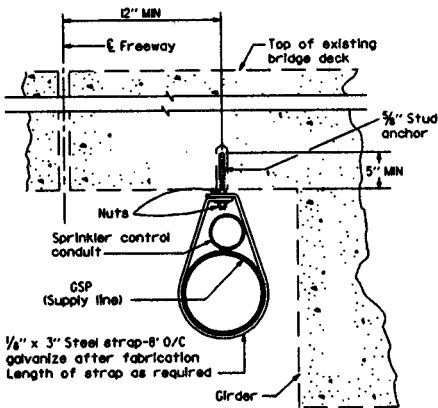


SECTION
POINTS OF MEASUREMENT

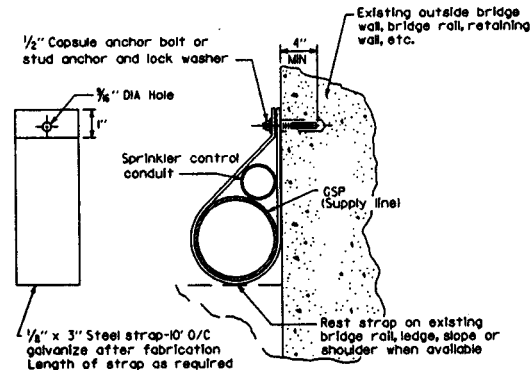
Identification labels
For abbreviations see
Standard Plans H-1 and H-2
For controller and
station number see
project plans



SECTION
VALVE BOX IDENTIFICATION



PIPE ANCHOR TYPE II



PIPE ANCHOR TYPE I

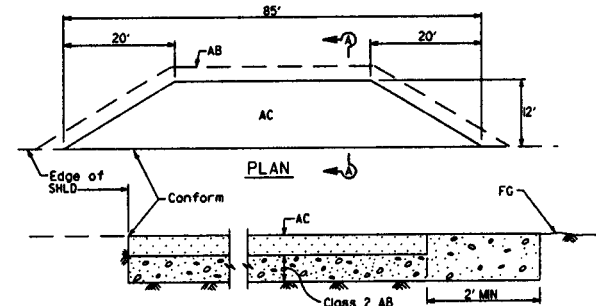
To accompany plans dated _____

DIST	COUNTY	ROUTE	POST MILES	SHEET TOTAL	TOTAL PROJECT	REV. SHEETS

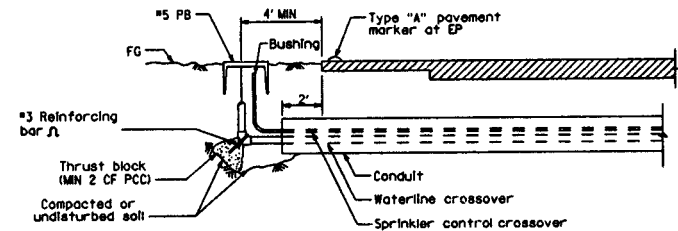
June 13, 1994
PLANS APPROVAL DATE

REGISTERED CIVIL ENGINEER

STATE OF CALIFORNIA



SECTION A-A
MAINTENANCE VEHICLE PULLOUT



SECTION
WELDED STEEL PIPE CONDUIT
(JACKED OR DRILLED)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PLANTING AND IRRIGATION
DETAILS

NO SCALE

REVISED STANDARD PLAN RSP H8

STD. PLAN RSP H8

NOTES:

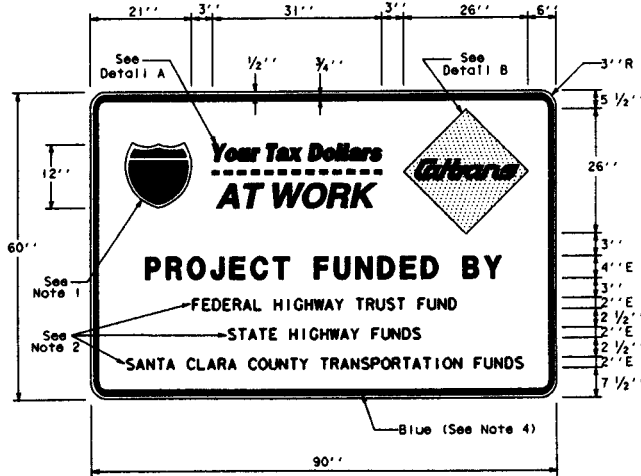
1. ROUTE SHIELD (STATE FURNISHED).
2. THE SIGN MESSAGES SHOWN FOR FUND TYPES ARE EXAMPLES ONLY. SEE THE SPECIAL PROVISIONS FOR THE APPLICABLE FUND TYPE MESSAGES TO BE USED.
3. EXCEPT AS OTHERWISE SHOWN, THE LEGEND OF THE SIGN SHALL BE BLACK ON A WHITE BACKGROUND (NON-REFLECTIVE).
4. THE BORDER OF THE SIGNS AND DETAILS 'A' AND 'C' SHALL BE BLUE (NON-REFLECTIVE).
5. THE DIAMOND IN DETAILS 'B' AND 'D' SHALL BE ORANGE (NON-REFLECTIVE).

To accompany plans dated _____

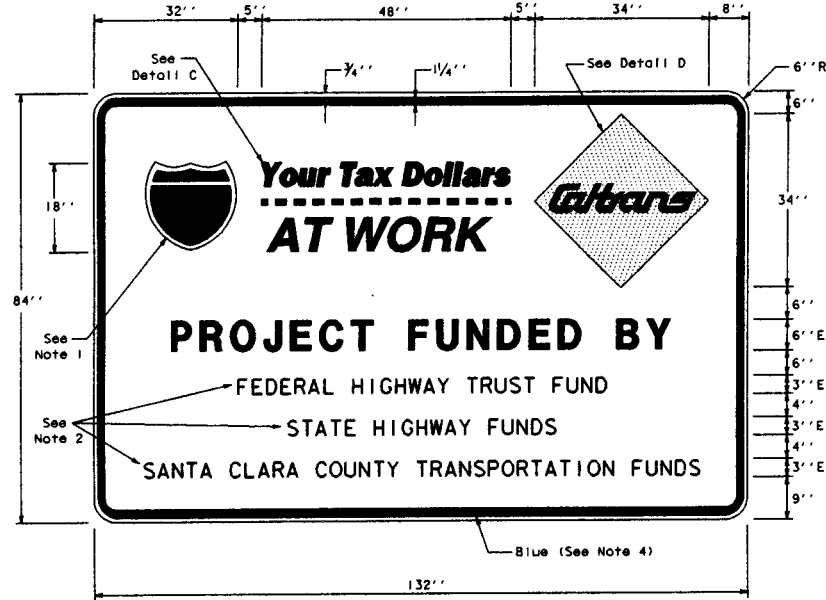
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
				12284	

REGISTERED CIVIL ENGINEER
P. London Jr.
No. 3-3-93
CIVIL
STATE OF CALIFORNIA

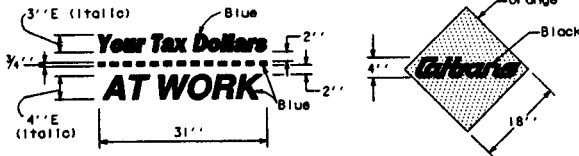
July 1, 1992
PLANS APPROVAL DATE



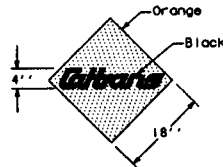
TYPE 1



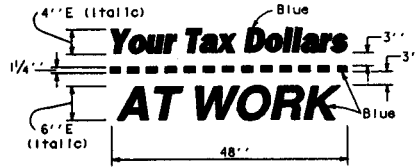
TYPE 2



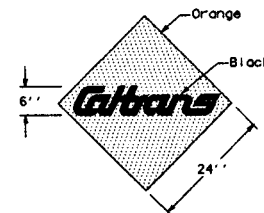
Detail A
(See Note 4)



Detail B
(See Note 5)



Detail C
(See Note 4)



Detail D
(See Note 5)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

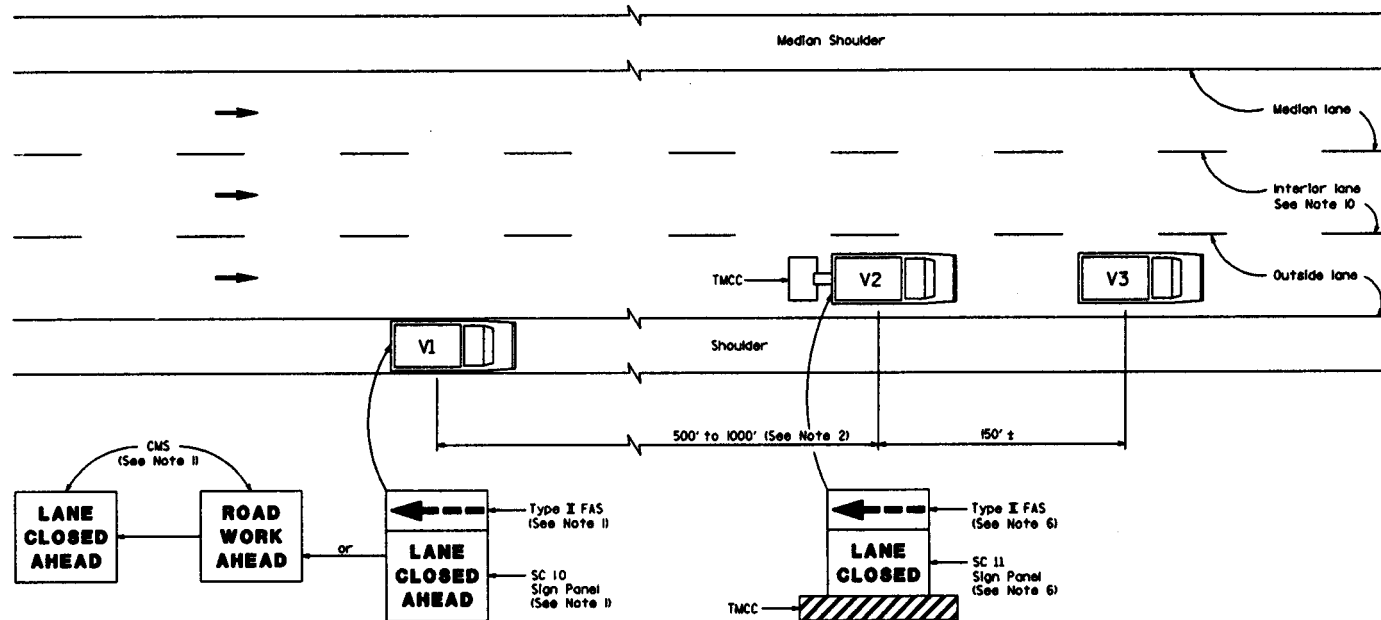
**CONSTRUCTION PROJECT
FUNDING
IDENTIFICATION SIGNS**
NO SCALE

To accompany plans dated _____

DIST.	COUNTY	ROUTE	POST MILE TOTAL PROJECT	SHEET TOTAL SHEETS

REGISTERED CIVIL ENGINEER
M. J. [Signature]
 June 13, 1994
 PLANS APPROVAL DATE

2. LINDEN JR.
 12284
 Exp. 3-31-97
 CIVIL
 STATE OF CALIFORNIA



MOVING LANE CLOSURE ON MEDIAN OR OUTSIDE LANE OF MULTILANE HIGHWAYS

NOTES

- Either the SC 10 sign panel shown or a changeable message sign shall be mounted on the rear of sign vehicle V1. A Type II flashing arrow sign shall be mounted on the rear of sign vehicle V1 and used with the SC 10 sign panel. A Type II flashing arrow sign will not be required with the changeable message sign provided the flashing arrow sign symbol may be displayed on the changeable message sign board. The changeable message sign shall be sequenced to show the "ROAD WORK AHEAD" message first, followed by the "LANE CLOSED AHEAD" message and then the flashing arrow sign symbol. For median lane closure, the flashing arrow sign symbol shall be reversed with the arrowhead on the right.
- If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue.
- A minimum sight distance of 1500 feet should be provided in advance of sign vehicle V1.
- Sign vehicle V1 should remain at the beginning of horizontal or vertical curves until the other vehicles (V2 and V3) are far enough beyond the curve to resume the minimum sight distance of 1500 feet.
- Vehicle-mounted sign panels shall be Type II or III reflectorized sheeting, black on white or black on orange with 6 inch minimum series D letters per Caltrans sign specifications.
- Shadow vehicle V2 shall weigh between 10,000 and 18,000 pounds and shall be equipped with a truck-mounted crash cushion. The sign panel shown and a Type II flashing arrow sign shall be mounted on the rear of shadow vehicle V2. For median lane closure, the flashing arrow sign symbol shall be reversed with the arrowhead on the right.
- All vehicles used for lane closures shall be equipped with two-way radios and the vehicle operators shall maintain communication during the work or application operation.
- All vehicles shall be equipped with flashing or rotating amber lights.
- Where sufficient shoulder width is not available and sign vehicle V1 would encroach upon the traveled way of the adjacent traffic lane during lane closures or where workers would be on foot in the work area, a stationary type lane closure (Standard Plan T10, T11, and so on, as applicable) shall be used instead of this plan.
- For moving lane closure on interior lane of multilane highways, see Standard Plan T16.

LEGEND

- V1 Sign Vehicle
- V2 Shadow Vehicle
- V3 Work/Application Vehicle
- FAS Flashing Arrow Sign
- CMS Changeable Message Sign
- TMCC Truck-Mounted Crash Cushion
- ➔ Direction of Travel

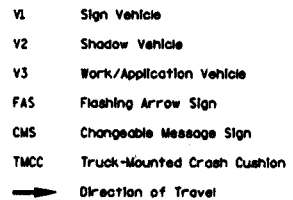
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURE ON MULTILANE HIGHWAYS

NO SCALE

NEW STANDARD PLAN NSP T16

STD. PLAN NSP T16



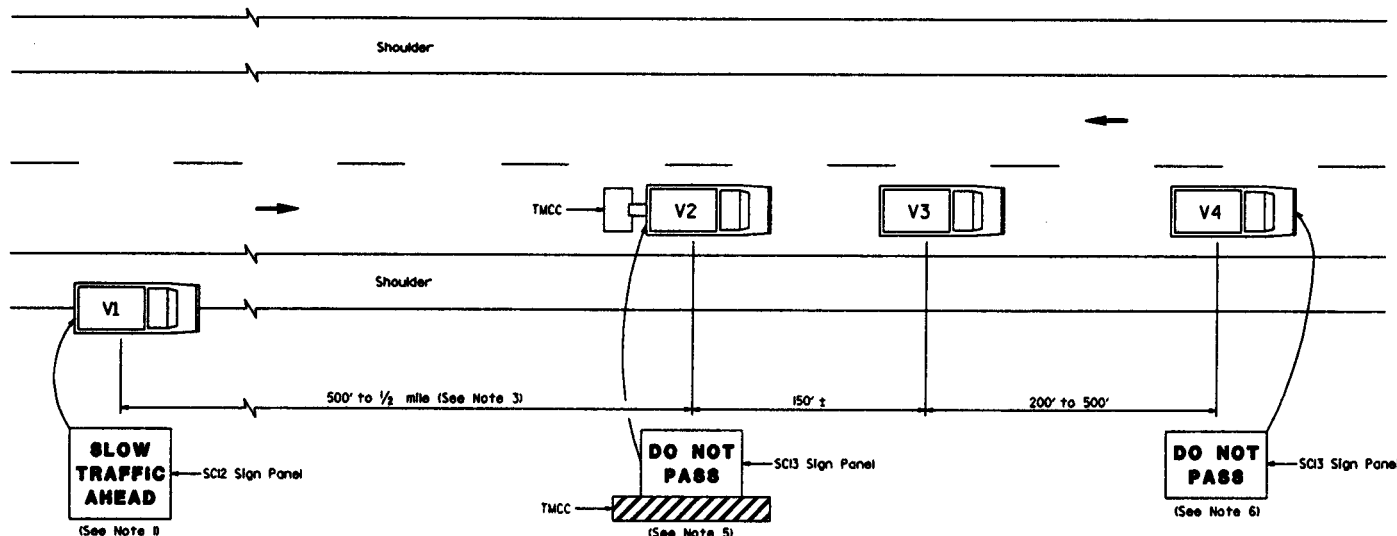
8. All vehicles shall be equipped with flashing or rotating amber lights.
9. Where sufficient shoulder width is not available and sign vehicle would encroach upon the traveled way of the adjacent traffic lane during lane closure or where workers would be on foot in the work area, a stationary type lane closure (Standard Plan T10, T11, and so on, as applicable) shall be used instead of this plan.
10. For moving lane closure on median or outside lanes of multilane highways, see Standard Plan T15.

NEW STANDARD PLAN NSP T16

DIST.	COUNTY	ROUTE	POST MILES	SHEET NO.	TOTAL SHEETS
REGISTERED CIVIL ENGINEER June 13, 1994 PLANS APPROVAL DATE					



To accompany plans dated _____



NOTES

1. Either the sign panel shown or a changeable message sign which can display the "SLOW TRAFFIC AHEAD" message shall be mounted on the rear of sign vehicle V1.
2. Sign vehicle V1 should be positioned where highly visible when shoulders are not available.
3. If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue.
4. Vehicle-mounted sign panels shall be Type II or III reflectorized sheeting, black on white or black on orange with 6 inch minimum series D letters per Caltrans sign specifications.
5. Shadow vehicle V2 shall weigh between 11,000 and 18,000 pounds and shall be equipped with a truck-mounted crash cushion. The sign panel shown shall be mounted on the rear of shadow vehicle V2. The message "LANE CLOSED" may be used in place of the "DO NOT PASS" message.

6. The sign panel shown shall be mounted on the front of sign vehicle V4, facing opposing traffic. The message "CAUTION" may be used in place of the "DO NOT PASS" message.
7. All vehicles shall be equipped with flashing or rotating amber lights.
8. Sign vehicle V4 will not be required when the work and vehicles V2 and V3 are 2 feet or more from the centerline of the highway during the work or application operations.
9. All vehicles used for lane closures shall be equipped with two-way radios and the vehicle operators shall maintain communication during the work or application operation.
10. This plan shall not be used where workers would be on foot in the work area. Use a stationary type lane closure (Standard Plan T13) for this condition.

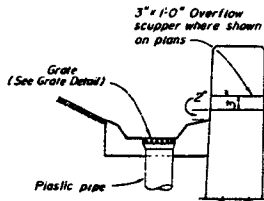
LEGEND

- V1 Sign Vehicle
- V2 Shadow Vehicle
- V3 Work/Application Vehicle
- V4 Sign Vehicle
- TMCC Truck-Mounted Crash Cushion
- ➔ Direction of Travel

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

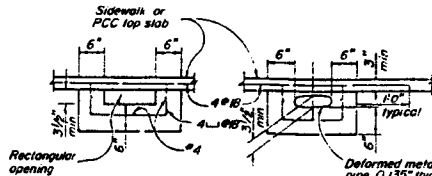
TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURE ON TWO LANE HIGHWAYS

NO SCALE



WALL DRAIN DETAIL

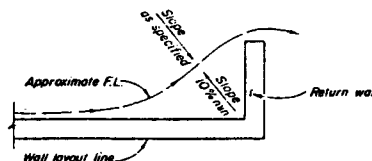
Scale: 1" = 1'-0"



Note: Area of opening to be not less than that of pipe from wall gutter. Make opening transition in wall. Edge opening in curb face to 3/4\"/>

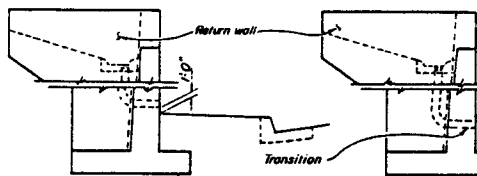
OUTLET DETAIL - SECTION B-B

Scale: 1" = 1'-0"



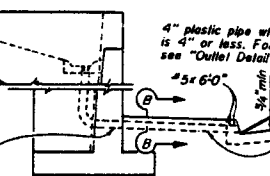
WALL DRAINAGE WHERE GUTTER NOT REQUIRED

Scale: 3/4\"/>



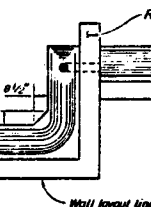
RETAINING WALL, FACE OF WALL OUTLET

Scale: 3/8\"/>

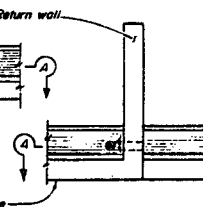


RETAINING WALL, GUTTER OUTLET

Scale: 3/8\"/>



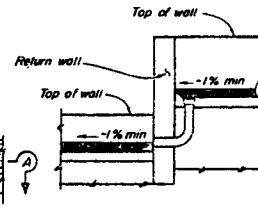
PLAN-OFFSET WALL



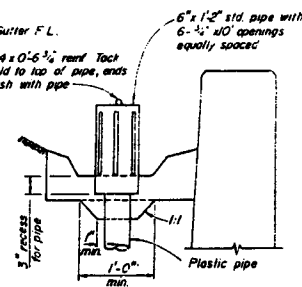
PLAN-CONTINUOUS WALL

DRAIN THROUGH RETURN WALL

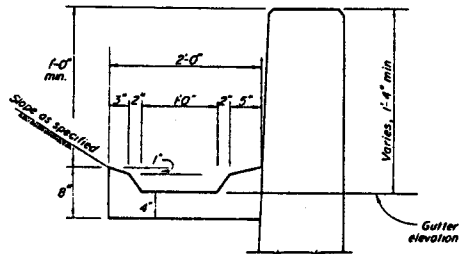
Scale: 3/8\"/>



SECTION A-A



WALL DRAIN WITH PIPE DOME



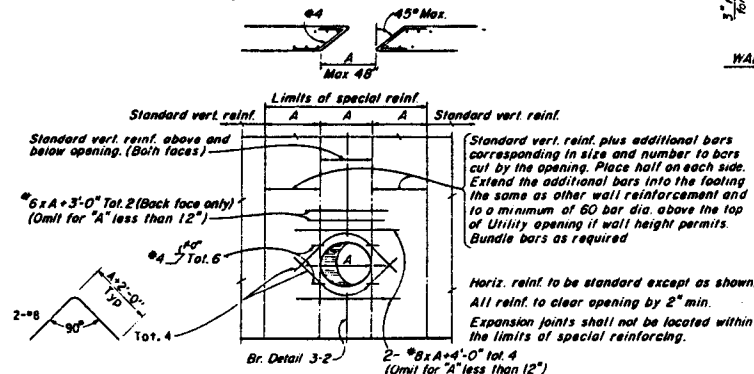
TYPICAL GUTTER DETAIL

Scale: 1/2\"/>



GRATE DETAIL

Sizes to fit Standard Hubs



RETAINING WALL UTILITY OPENING

Max size of Opening (A) = 48\"/>

To be used in conjunction with sheet 83-9

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**RETAINING WALL
DETAILS NO. 2**

NO SCALE

RSP 83-9 DATED NOVEMBER 5, 1992 SUPERSEDES
STANDARD PLAN 83-9 DATED JULY 1, 1992, PAGE 141
OF THE STANDARD PLANS BOOK DATED JULY 1992.

JULY 1992 STANDARD PLANS BOOK

NEW STANDARD PLANS (NSP) AND REVISED STANDARD PLANS (RSP) ISSUED SUBSEQUENT TO THE PUBLICATION OF THE JULY, 1992 STANDARD PLANS BOOK

PLAN NO.	PLAN TITLE	DATED
NSP A88	Curb Ramp Details No. 1 <i>CANCELED</i> (Will be reissued at a future date)	7-01-92
NSP A89	Curb Ramp Details No. 2 <i>CANCELED</i> (Will be reissued at a future date)	7-01-92
NSP T7	Construction Project Funding Identification Signs	7-01-92
-----	-----	-----
RSP A20D	Pavement Markers and Traffic Lines Typical Details	11-05-92
RSP B3-9	Retaining Wall Details No. 2	11-05-92
-----	-----	-----
NSP A40	Rumble Strip Details	6-13-94
NSP A75D	Concrete Headlight Glare Screen	6-13-94
RSP A87	Curbs, Dikes and Driveways	6-13-94
RSP H8	Planting and Irrigation Details	6-13-94
NSP T15	Traffic Control System for Moving Lane Closure on Multilane Highways	6-13-94
NSP T16	Traffic Control System for Moving Lane Closure on Multilane Highways	6-13-94
NSP T17	Traffic Control System for Moving Lane Closure on Two Lane Highways	6-13-94

GENERAL ROAD WORK

MISCELLANEOUS

- A10A Abbreviations
- A10B Symbols
- A20A Pavement Markers and Traffic Lines, Typical Details
- A20B Pavement Markers and Traffic Lines, Typical Details
- A20C Pavement Markers and Traffic Lines, Typical Details
- RSP A20D Pavement Markers and Traffic Lines, Typical Details
- A24A Pavement Markings- Arrows
- A24B Pavement Markings- Arrows
- A24C Pavement Markings- Symbols and Numerals
- A24D Pavement Markings- Words
- A24E Pavement Markings- Words and Crosswalks
- A35A Portland Cement Concrete Paving Details
- A62A Excavation and Backfill- Miscellaneous Details
- A62B Limits of Payment for Excavation and Backfill Bridge- Surcharge and Wall
- A62C Limits of Payment for Excavation and Backfill- Bridge
- A62D Excavation and Backfill- Concrete Pipe Culverts
- A62E Excavation and Backfill- Cast-In-Place Reinforced Concrete Box and Arch Culverts
- A62F Excavation and Backfill- Metal and Plastic Culverts
- A73A Markers
- A73B Markers
- A73C Delineators, Channelizers and Barricades
- A74 Survey Monuments
- A75A Concrete Barrier Type 50
- A75B Concrete Barrier Type 50E
- A75C Headlight Glare Screen
- A77A Metal Beam Guard Railing
- A77B Metal Beam Guard Railing- Standard Hardware
- A77C Metal Beam Guard Railing- Posts and Blocks
- A77D Guard Rail Flares
- A77E Guard Rail Flares
- A77F Metal Beam Guard Railing- Miscellaneous Details
- A77G Guard Rail End Anchors (Breakaway)
- A77H Guard Rail End Anchors (Breakaway Hardware)
- A77I Barrier and Guard Rail End Anchors
- A77J Guard Rail Connections to Bridge Rails, Retaining Walls and Abutments
- A77K Guard Rail Connections to Bridge Sidewalks and Curbs
- A78A Thrile Beam Barrier
- A78B Thrile Beam Barrier- Standard Hardware and Miscellaneous Details
- A78C Thrile Beam Barrier- End Anchors
- A78D Thrile Beam Barrier Connection to Concrete Barrier Type 50
- A78E Thrile Beam Barrier Connections to Bridge Rails
- A78F Thrile Beam Barrier Connections to Bridge Curbs, Retaining Walls and Abutments
- A80 Thrile Beam Barrier Emergency Passageway
- A81 Crash Cushion, Sand Filled
- A83 Portable Scale Pad and Approach Slab Details
- A85 Chain Link Fence
- A86 Barbed Wire and Wire Mesh Fences
- RSP A87 Curbs, Dikes and Driveways

CRIB WALLS

- C7A Reinforced Concrete Crib Wall- Battered Walls- Types A,B and C
- C7B Reinforced Concrete Crib Wall- Battered Walls- Types D,E and F
- C7C Reinforced Concrete Crib Wall- Vertical Walls- Types A,B and C
- C7D Reinforced Concrete Crib Wall- Vertical Walls- Types D,E and F
- C7E Reinforced Concrete Crib Wall- Types A,B,C,D,E and F Header and Struts Details
- C7F Design Data for Reinforced Concrete Crib Wall Foundation Pressure-Battered Wall
- C7G Reinforced Concrete Crib Wall Foundation Pressure-Vertical Wall
- C8A Steel Crib Wall- Construction Details
- C8B Steel Crib Wall- Design Data
- C8C Steel Crib Wall- Design Data
- C9A Timber Crib Wall- Types A,B,C and D
- C9B Timber Crib Wall- Types A,B,C and D Design Data

DRAINAGE

- D72 Drainage Inlets
- D73 Drainage Inlets
- D74A Drainage Inlets
- D74B Drainage Inlets
- D74C Drainage Inlets Details
- D75 Pipe Inlet
- D77A Grate Details
- D77B Bicycle Proof Grate Details
- D77C Alternative Hinged Cover for Type DL and OS Inlets and Trash Rack for Type OCP Inlet
- D78 Gutter Depressions
- D79 Precast Reinforced Concrete Pipe- Direct Design Method
- D80 Cast-In-Place Reinforced Concrete Single Box Culvert
- D81 Cast-In-Place Reinforced Concrete Double Box Culvert
- D82 Cast-In-Place Reinforced Concrete Box Culvert Miscellaneous Details
- D84 Box Culvert Wingwalls- Types A,B,C
- D85 Box Culvert Wingwalls- Types D and E
- D86A Box Culvert Warped Wingwalls
- D86B Pipe Culvert Headwalls, Endwalls and Warped Wingwalls
- D86C Arch Culvert Headwalls, Endwalls and Warped Wingwalls
- D87A Overside Drains
- D87B Overside Drains
- D87C Underdrains
- D88 Construction Loads on Culverts
- D88A Strut Details for Structural Steel Plate Pipes, Arches, and Vehicular Undercrossings
- D89 Pipe Headwalls
- D90 Pipe Culvert Headwalls, Endwalls and Wingwalls- Types A,B and C
- D93A Pipe Riser Connections
- D93B Drainage Inlet Riser Connections
- D93C Pipe Riser with Debris Rack Cage
- D94A Metal and Plastic Flared End Sections
- D94B Concrete Flared End Sections
- D95 Concrete Arch Culverts
- D97A Corrugated Metal Pipe Coupling Details No. 1- Annular Coupling Band Bar and Strap and Angle Connectors
- D97B Corrugated Metal Pipe Coupling Details No. 2- Hat Band Coupler and Flange Details
- D97C Corrugated Metal Pipe Coupling Details No. 3- Helical and Universal Couplers
- D97D Corrugated Metal Pipe Coupling Details No. 4- Hugger Coupling Bands
- D97E Corrugated Metal Pipe Coupling Details No. 5- Standard Joint
- D97F Corrugated Metal Pipe Coupling Details No. 6- Positive Joint
- D97G Corrugated Metal Pipe Coupling Details No. 7- Positive Joints and Downdrains
- D97H Reinforced Concrete Pipe or Non-Reinforced Concrete Pipe Standard and Positive Joints
- D98A Slotted Corrugated Steel Pipe Drain Details
- D98B Slotted Corrugated Steel Pipe Drain Details
- D99A Structural Section Drainage System Details
- D99B Edge Drain Outlet and Vent Details
- D99C Edge Drain Cleanout and Vent Details
- D99D Cross Drain Interceptor Details

HIGHWAY PLANTING

- H1 Planting and Irrigation- Abbreviations
- H2 Planting and Irrigation- Symbols
- H3 Planting and Irrigation- Details
- H4 Planting and Irrigation- Details
- H5 Planting and Irrigation- Details
- H6 Planting and Irrigation- Details
- H7 Planting and Irrigation- Details
- RSP H8 Planting and Irrigation Details

TEMPORARY FACILITIES

- T1 Temporary Crash Cushion, Sand Filled
- T2 Temporary Crash Cushion, Sand Filled
- T3 Temporary Rolling (Type K)

SIST.	COUNTY	ROUTE	DATE	BY	CHK

To accompany plans dated _____

- T4 Temporary Traffic Screen
- T10 Traffic Control System for Lane Closure on Freeways and Expressways
- T10A Traffic Control System for Lane and Complete Closures on Freeways and Expressways
- T11 Traffic Control System for Lane Closure on Multilane Conventional Highways
- T12 Traffic Control System for Lane Closure on Multilane Conventional Highways
- T13 Traffic Control System for Lane Closure on Two Lane Conventional Highways
- T14 Traffic Control System for Ramp Closures

BRIDGE

- B0-1 Bridge Details
- B0-3 Bridge Details
- B0-5 Bridge Details
- B0-13 Bridge Details
- B2-3 16" Cast-In-Drilled-Hole Concrete Pile
- B2-5 Pile Details- Class 45 and Class 70
- B2-8 Pile Details- Class 45C and Class 70C
- B2-9 Load Test Anchor Pile Details
- B3-1 Retaining Wall- Type 1, H=4'-30'
- B3-2 Retaining Wall- Type 1, H=32'-38'
- B3-3 Retaining Wall- Type 1A
- B3-4 Retaining Wall- Type 2
- B3-5 Counterfort Retaining Wall- Type 3
- B3-6 Counterfort Retaining Wall- Type 4
- B3-7 Retaining Wall- Type 5
- B3-8 Retaining Wall Details No. 1
- RSP B3-9 Retaining Wall Details No. 2
- B3-11 Retaining Wall Type 6-6'-0" Maximum
- B6-1 T-Beam Details
- B6-10 Utility Openings, T-Beam
- B6-21 Joint Seals (Maximum Movement Rating = 2")
- B7-1 Box Girder Details
- B7-5 Deck Drains
- B7-6 Deck Drains- Type D-1 and D-2
- B7-10 Utility Opening- Box Girder
- B7-11 Utility Details
- B8-5 Cast-In-Place Prestressed Girder Details
- B11-7 Chain Link Railing
- B11-47 Cable Railing
- B11-51 Tubular Hand Railing
- B11-52 Chain Link Railing Type 7
- B11-53 Concrete Barrier Type 25
- B11-54 Concrete Barrier Type 26
- B13-1 Slope Protection Detail No. 1
- B13-2 Slope Protection Detail No. 2
- B14-1 Structural Steel Plate Vehicular Undercrossing
- B14-3 Communication and Sprinkler Control Conduit (Conduit less than 4" Diameter)
- B14-4 Water Supply Line (Bridge) (Pipe less than 4" Diameter)
- B14-5 Water Supply Line (Details) (Pipe less than 4" Diameter)

ROADSIDE SIGNS

- R51 Roadside Signs, Typical Installation Details No. 1
- R52 Roadside Signs, Wood Posts, Typical Installation Detail No. 2
- R53 Roadside Signs, Laminated Box Wood Posts, Typical Installation Details No. 3
- R54 Roadside Signs, Typical Installation Detail No. 4

SHEET 1 OF 2
STANDARD PLANS LIST
 (July, 1992 Edition)
 Revised June 13, 1994

OVERHEAD SIGNS**OVERHEAD SIGNS-TRUSS**

- S1 Overhead Signs- Truss, Instructions and Examples
- S2 Overhead Signs- Truss, Single Post Type, Post Type II thru VII
- S3 Overhead Signs- Truss, Two Post Type, Post Type I-S thru VII-S
- S4 Overhead Signs- Truss, Single Post Type, Structural Frame Members
- S5 Overhead Signs- Truss, Two Post Type, Structural Frame Members
- S6 Overhead Signs- Truss, Structural Frame Details
- S7 Overhead Signs- Truss, Frame Junction Details
- S8A Overhead Signs- Steel Frame Removable Sign Panel Frames
- S8B Overhead Signs- Removable Sign Panel Frames, Overhead Formed Panel Mounting Details
- S8C Overhead Signs- Truss, Sign Panel Mounting Details, Laminated Panel- Type A
- S8D Overhead Signs- Truss, Removable Sign Panel Frames 110" and 120" Sign Panels
- S9 Overhead Signs- Walkway Details No. 1
- S10 Overhead Signs- Walkway Details No. 2
- S11 Overhead Signs- Walkway Safety Railing Details
- S13 Overhead Signs- Truss Pile Foundation

OVERHEAD SIGNS-LIGHTWEIGHT

- S14A Overhead Signs- Lightweight Balanced-Single Steel Post Connection and Mounting Details
- S14B Overhead Signs- Lightweight Balanced-Single Steel Post Details
- S15 Overhead Signs- Lightweight, Type A, Connection Details
- S16 Overhead Signs- Lightweight, Type B, Connection Details
- S17 Overhead Signs- Lightweight, Type C, Connection Details
- S18A Overhead Signs- Lightweight, Sign Panel Mounting Details, Laminated Panels- Type A
- S18B Overhead Signs- Lightweight, Light Fixture Mounting Details
- S20A Overhead Signs- Lightweight Post Details
- S20B Overhead Signs- Lightweight Foundation

OVERHEAD SIGNS-BOX BEAM CLOSED TRUSS ALTERNATIVE

- S39 Overhead Signs- Box Beam, Closed Truss Foundation
- S40A Overhead Signs- Box Beam, Closed Truss, Two Post Type Frame Members
- S40B Overhead Signs- Box Beam, Closed Truss, Single and Two Post Type General Frame Details
- S40C Overhead Signs- Box Beam, Closed Truss, Ribbed Sheet Metal Details
- S40D Overhead Signs- Box Beam, Closed Truss, Two Post Type Frame Details
- S40E Overhead Signs- Box Beam, Closed Truss, Two Post Type Frame Junction Details
- S40F Overhead Signs- Box Beam, Closed Truss, Two Post Type Post Details
- S40G Overhead Signs- Box Beam, Closed Truss, Single Post Type Frame Members
- S40H Overhead Signs- Box Beam, Closed Truss, Single Post Cantilever Frame Details
- S40I Overhead Signs- Box Beam, Closed Truss, Single Post Cantilever Frame Junction Details
- S40J Overhead Signs- Box Beam, Closed Truss, Single Post Cantilever Post Details
- S40K Overhead Signs- Box Beam, Closed Truss, Single Post Butterfly Frame Details
- S40L Overhead Signs- Box Beam, Closed Truss, Single Post Butterfly Frame Junction Details
- S40M Overhead Signs- Box Beam, Closed Truss, Single Post Butterfly Post Details

OVERHEAD SIGNS-TUBULAR

- S40N Overhead Signs- Tubular, Instructions and Examples
- S40P Overhead Signs- Tubular, Single Post Type Layout and Pipe Selection
- S40Q Overhead Signs- Tubular, Two Post Type Layout and Pipe Sections
- S40R Overhead Signs- Tubular, Structural Frame Details No. 1
- S40S Overhead Signs- Tubular, Structural Frame Details No. 2
- S40T Overhead Signs- Tubular Foundation Details

SIGNALS, LIGHTING AND ELECTRICAL SYSTEMS

- ES-1A Signal, Lighting and Electrical Systems- Symbols and Abbreviations
- ES-1B Signal, Lighting and Electrical Systems- Symbols and Abbreviations
- ES-2A Signal, Lighting and Electrical Systems- Service Equipment
- ES-2B Signal, Lighting and Electrical Systems- Service Equipment
- ES-2C Signal, Lighting and Electrical Systems- Service Equipment Notes
- ES-2D Signal, Lighting and Electrical Systems- Service Equipment and Typical Wiring Diagram, Type A
- ES-2E Signal, Lighting and Electrical Systems- Service Equipment and Typical Wiring Diagram, Type B
- ES-2F Signal, Lighting and Electrical Systems- Service Equipment and Typical Wiring Diagram, Type C
- ES-3A Signal, Lighting and Electrical Systems- Signal Heads and Mountings
- ES-3B Signal, Lighting and Electrical Systems- Signal Heads and Mountings
- ES-3C Signal, Lighting and Electrical Systems- Signal Heads and Mountings
- ES-3D Signal, Lighting and Electrical Systems- Signal Heads and Mountings
- ES-3E Signal, Lighting and Electrical Systems- Signal Heads and Mountings
- ES-4A Signal, Lighting and Electrical Systems- Controller Cabinet Details
- ES-4B Signal, Lighting and Electrical Systems- Controller Cabinet Details
- ES-4C Signal, Lighting and Electrical Systems- Controller Cabinet Details
- ES-4D Irrigation Controller Enclosure Cabinet
- ES-4E Signal, Lighting and Electrical Systems- Telephone Demarcation Cabinet Details
- ES-4F Signal, Lighting and Electrical Systems- Telephone Demarcation Cabinet Details
- ES-5A Signal, Lighting and Electrical Systems- Detectors
- ES-5B Signal, Lighting and Electrical Systems- Detectors
- ES-5C Signal, Lighting and Electrical Systems- Detectors
- ES-5D Signal, Lighting and Electrical Systems- Detectors
- ES-5E Signal, Lighting and Electrical Systems- Detectors
- ES-5F Signal, Lighting and Electrical Systems- Pedestrian Barricades
- ES-6A Signal and Lighting Standards- Type I Standards and Equipment Numbering
- ES-6AA Signal Standards- Push Button Post
- ES-6B Lighting Standards- Types 15, 21 and 22
- ES-6C Lighting Standards- 80' to 160' High Mast Light Pole, Foundation Details
- ES-6D Lighting Standards- Types 30 and 31, Slip Base
- ES-6DA Lighting Standards- Type 32
- ES-6E Lighting Standards- Types 30 and 31, Slip Base Plate Details
- ES-6F Lighting Standards- 10 Degree Type
- ES-6H Lighting Standards- 10 Degree Type, Details
- ES-6J Signal and Lighting Standards- Case 1 Arm Loading, Wind Velocity = 70 MPH, Arm Lengths 15' to 30'
- ES-6K Signal and Lighting Standards- Case 2 Arm Loading, Wind Velocity = 70 MPH, Arm Lengths 20' to 30'
- ES-6L Signal and Lighting Standards- Case 3 Arm Loading, Wind Velocity = 70 MPH, Arm Lengths 15' to 45'
- ES-6M Signal and Lighting Standards- Case 4 Arm Loading, Wind Velocity = 70 MPH, Arm Lengths 25' to 45'
- ES-6MA Signal and Lighting Standards- Case 5 Arm Loading, Wind Velocity = 70 MPH, Arm Lengths 50' to 55'
- ES-6N Signal and Lighting Standards- Type 40-0-80
- ES-6O Signal and Lighting Standards- Case 1 Arm Loading, Wind Velocity = 80 MPH, Arm Lengths 25' to 30'
- ES-6P Signal and Lighting Standards- Case 2 Arm Loading, Wind Velocity = 80 MPH, Arm Lengths 20' to 30'
- ES-6Q Signal and Lighting Standards- Case 3 Arm Loading, Wind Velocity = 80 MPH, Arm Lengths 20' to 45'
- ES-6R Signal and Lighting Standards- Case 4 Arm Loading, Wind Velocity = 80 MPH, Arm Lengths 25' to 45'
- ES-6RA Signal and Lighting Standards- Case 5 Arm Loading, Wind Velocity = 80 MPH, Arm Lengths 50' to 55'

DIST.	COUNTY	ROUTE	POST MILE	DATE	BY

To accompany plans dated _____

- ES-6S Signal and Lighting Standards- Details No. 1
- ES-6T Signal and Lighting Standards- Details No. 2
- ES-6TA Signal and Lighting Standards- Pole and Mast Arm Alternatives
- ES-6U Lighting Standards- Types 10 and 15 Slip Base Insert
- ES-6V Signal and Sign Standards- Type 33 Left Turn
- ES-7A Signal, Lighting and Electrical Systems- Electrical Details, Structure Installations
- ES-7B Signal, Lighting and Electrical Systems- Electrical Details, Structure Installations
- ES-7C Signal, Lighting and Electrical Systems- Electrical Details, Structure Installations
- ES-7D Signal, Lighting and Electrical Systems- Electrical Details, Structure Installations
- ES-7E Signal, Lighting and Electrical Systems- Electrical Details, Structure Installations
- ES-7F Signal, Lighting and Electrical Systems- Flush Soffit Luminaire Modification Details, Structure Installation
- ES-8 Signal, Lighting and Electrical Systems- Pull Box Details
- ES-9A Signal, Lighting and Electrical Systems- Cantilever Floating Beacon, Types 9, 9A, 9B
- ES-9B Signal, Lighting and Electrical Systems- Cantilever Floating Beacon, Types 9, 9A, 9B
- ES-10 Signal, Lighting and Electrical Systems- Isolux Diagrams
- ES-11 Signal, Lighting and Electrical Systems- Foundation Installations
- ES-12 Signal, Lighting and Electrical Systems- Pedestrian Undercrossing Fluorescent Lighting Fixture
- ES-13 Signal, Lighting and Electrical Systems- Splicing Details
- ES-14 Signal, Lighting and Electrical Systems- Wiring Detail and Fuse Ratings
- ES-15 Signal, Lighting and Electrical Systems- Pedestrian Overcrossing Fluorescent Lighting Fixture
- ES-27A Signal, Lighting and Electrical Systems- Extinguishable Message Sign, 10' Letters
- ES-27B Signal, Lighting and Electrical Systems- Extinguishable Message Sign, 10' Letters
- ES-28 Signal, Lighting and Electrical Systems- Extinguishable Message Sign and Flashing Beacons

SIGN ILLUMINATION

- ES-29 Sign Illumination- Mercury Sign Illumination Equipment
- ES-30 Sign Illumination- 36" Fluorescent Sign Illumination Equipment
- ES-32A Sign Illumination- Sign Illumination Equipment
- ES-32B Sign Illumination- Sign Illumination Control
- ES-33 Sign Illumination- Internally Illuminated Street Name Sign

NEW STANDARD PLANS

- NSP A40 Rumble Strip Details
- NSP A75D Concrete Headlight Glare Screen
- NSP A88 Curve Ramp Details No. 1
- NSP A89 Curve Ramp Details No. 2
- NSP T7 Construction Project Funding Identification Signs
- NSP T15 Traffic Control System for Moving Lane Closure on Multilane Highways
- NSP T16 Traffic Control System for Moving Lane Closure on Multilane Highways
- NSP T17 Traffic Control System for Moving Lane Closure on Two Lane Highways

SHEET 2 OF 2
STANDARD PLANS LIST
 (July, 1992 Edition)
 Revised June 13, 1994